

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in this application.

Claims 1-13. (cancelled herein)

14. (new) A process for treating microelectronic or optoelectronic substrates that have a working layer with a free surface thereof, which method comprises annealing the substrate under a reductive atmosphere to assist in smoothing of the free surface and then chemical mechanical polishing the free surface to prepare it surface for further processing.

15. (new) The process of claim 14, wherein the reductive atmosphere comprises hydrogen or a mixture of hydrogen and argon.

16. (new) The process of claim 14, wherein the annealing is conducted for less than 3 minutes at a temperature between 1100 and 1300°C.

17. (new) The process of claim 14, wherein the annealing is conducted for less than 60 seconds at a temperature between 1200 and 1230°C.

18. (new) The process of claim 14, which further comprises oxidizing the working layer prior to polishing to provide at least a portion of the free surface as an oxide.

19. (new) The process of claim 18, which further comprises removing a portion of the oxide prior to annealing.

20. (new) The process of claim 14, wherein the further processing includes one or more heat treatments of the substrates.

21. (new) The process of claim 14, which further comprises oxidizing the working layer after polishing to provide at least a portion of the free surface as an oxide.
22. (new) The process of claim 21, wherein the oxidizing is carried out to form a protective oxide on the working layer and which further comprises subjecting the substrates to further processing including at least one further heat treatment while the working layer is protected by the oxide.
23. (new) The process of claim 14, which further comprises annealing the substrates after the polishing step in order to improve qualities of the working layer.
24. (new) The process of claim 14, wherein the working layer is provided by implanting atoms into a wafer to form a weakened atom implantation zone that defines the working layer, bonding the wafer to the substrate and then detaching the working layer from the wafer along the weakened zone to transfer it to the substrate.
25. (new) The process of claim 24, wherein the working layer is made of a semiconductor material.
26. (new) The process of claim 24, wherein the working layer is made of silicon.
27. (new) The process of claim 14, wherein the free surface has a final rms roughness of between 0.8 and 1.5 angstroms.